



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,689	12/02/2003	Steven P. Morton	555255012654	2556
33070	7590	06/25/2007		
JOSEPH M. SAUER			EXAMINER	
JONES DAY REAVIS & POGUE			FILE, ERIN M	
NORTH POINT, 901 LAKESIDE AVENUE				
CLEVELAND, OH 44114				
			ART UNIT	PAPER NUMBER
			2611	
			MAIL DATE	DELIVERY MODE
			06/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/725,689

Applicant(s)

MORTON ET AL.

Examiner

Erin M. File

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,4-9,11 is/are rejected.  
7) ☐ Claim(s) 3 and 10 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12/2/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/26/2005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. The drawing are objected to for failing to illustrate a method as described in claims 8-10.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 7, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Barret (U.S. Patent No. 3,818,364).

**Claims 1, 8, Barret discloses:**

- a variable amplifier that receives a control signal and an input signal, the variable amplifier being operable to apply a gain to the input signal to generate an output signal, wherein the gain is a function of the control signal (col. 1, lines 4-7);
- a summation module that combines a gain reference signal and a gain variation signal to generate the control signal; the gain reference signal being calibrated at a reference temperature and a reference frequency (abstract, lines 2-4, col. 3, lines 27-30 discloses that the program-signal direct current reference signal); and
- a gain calibration module that outputs the gain variation signal as a function of a current operating temperature and a current operating frequency (col. 1, line 60- col. 2, line 17).

**Claim 5**, a digital-to-analog converter coupled between the variable amplifier and the summation module, the digital-to-analog converter being operable to convert the control signal from the digital domain into the analog domain (co. 4, lines 46-49).

**Claim 7**, wherein the variable amplifier is a voltage-controlled amplifier and the gain is a

function of a voltage of the control signal (col. 1, lines 25-38).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barret (U.S. Patent No. 3,818,364) as applied to claims 1 and 8 above, and further in view of Belisle (U.S. Patent No. 5,818,386) and Anmar (U.S. Patent No. 7,076,201).

**Claims 2, 9**, Barret fails to disclose the gain calibration module is a two-dimensional mapping module that stores a two-dimensional array of gain variation values and uses the current operating temperature and current operating frequency to interpolate the gain variation signal from the two-dimensional array of gain variation values, however, Belisle discloses gain calibration module is a two-dimensional mapping module that stores a two-dimensional array of gain variation values and uses the current operating frequency to interpolate the gain variation signal from the two-dimensional array of gain variation values (col. 7, lines 47-48, line 65-col. 8, line 2). Because Belisle discloses that his method leads to the advantage of reduced circuit complexity (col. 1, lines 7-9), it would have been obvious to one skilled in the art at the time of invention to incorporate the two dimensional gain valuation as disclosed by Belisle into the invention of Barret. Neither Barret nor Belisle disclose a temperature sensor that monitors the current

operating temperature for gain determination, however, Anmar discloses a temperature sensor that monitors the current operating temperature for determining gain values (col. 6, lines 51-53). Because accounting for temperature differences in an amplifier is well known in the art to reduce errors in an amplification device, it would have been obvious to one skilled in the art to incorporate the temperature sensors as disclosed by Anmar into the combined invention of Barret and Belisle.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barret (U.S. Patent No. 3,818,364) as applied to claim 1 above, and further in view of Anmar (U.S. Patent No. 7,076,201).

**Claim 4**, Barret fails to disclose a temperature sensor that monitors the current operating temperature, however, Anmar discloses a temperature sensor that monitors the current operating temperature (col. 6, lines 51-53). Because accounting for temperature differences in an amplifier is well known in the art to reduce errors in an amplification device, it would have been obvious to one skilled in the art to incorporate the temperature sensors as disclosed by Anmar into the invention of Barret.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barret (U.S. Patent No. 3,818,364) as applied to claim 1 above, and further in view of Kielty, Jr. et al. (U.S. Patent No. 6,639,983).

**Claim 6**, Barret fails to disclose a low pass filter coupled between the variable amplifier and the summation module operable to filter high frequency transients from the control

signal, however, Kielty discloses a low pass filter operable to filter high frequency transients (col. 6, line 63-col. 7, line 4). Because Kielty discloses this has the advantage of removing glitches (or errors) in the signal (col. 7, lines 4-7), it would have been obvious to one skilled in the art at the time of invention to incorporate the low pass filter as disclosed by Kielty into the invention of Barret.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barret (U.S. Patent No. 3,818,364) in view of Anmar (U.S. Patent No. 7,076,201).

**Claim 11**, Barret discloses:

- a memory subsystem operable to store data and program information (col. 2, line 67-col. 3, line 3);
- a processing subsystem operable to store and retrieve data in the memory subsystem, execute programs stored in the memory subprogram (col. 2, line 67-col. 3, line 3)
- a variable amplifier that receives a control signal and an input signal, the variable amplifier being operable to apply a gain to the input signal to generate an output signal, wherein the gain is a function of the control signal (col. 1, lines 4-7);
- means for combining a gain reference signal and a gain variation signal to generate the control signal (abstract, lines 2-4, col. 3, lines 27-30 discloses that the program-signal direct current reference signal)

Barret fails to disclose:

- a communication subsystem operable to send and receive electronic messages over a communication network;
- the gain reference signal is calibrated at a reference temperature and a reference frequency
- means for generating the gain variation signal as a function of a current operating temperature and a current operating frequency.

However, Anmar discloses:

- a communication subsystem operable to send and receive electronic messages over a communication network col. 1, lines 12-16);
- the gain reference signal is calibrated at a reference temperature and a reference frequency (col. 10, lines 8-21)
- means for generating the gain variation signal as a function of a current operating temperature and a current operating frequency (col. 10, lines 8-21, col. 6, lines 51-53).

Because accounting for temperature differences in an amplifier is well known in the art to reduce errors in an amplification device, it would have been obvious to one skilled in the art to incorporate the temperature sensors as disclosed by Anmar into the invention of Barret.

#### ***Allowable Subject Matter***

10. Claims 3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



Art Unit: 2611


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is 5712726040.

The examiner can normally be reached on M-F 1-9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 5712723024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erin M. File/  
Assistant Examiner, AU 2611  
6/11/2007

  
DAVID C. PAYNE  
SUPERVISORY PATENT EXAMINER